

# Source Water Assessment Program (SWAP) Report

## For

### Barre Mobile Home Park



Prepared by the  
Massachusetts Department of  
Environmental Protection,  
Bureau of Resource Protection,  
Drinking Water Program

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**Table 1: Public Water System (PWS) Information**

<i><b>PWS NAME</b></i>	Barre Mobile Home Park
<i><b>PWS Address</b></i>	RTE 122
<i><b>City/Town</b></i>	Barre
<i><b>PWS ID Number</b></i>	2021001
<i><b>Local Contact</b></i>	Paul Varney Sr.
<i><b>Phone Number</b></i>	(978) 355-4438

<i><b>Well Name</b></i>	<i><b>Source ID#</b></i>	<i><b>Zone I (in feet)</b></i>	<i><b>IWPA (in feet)</b></i>	<i><b>Source Susceptibility</b></i>
Well #1	2021001-01G	345	1,360	Moderate
Well #2	2021001-02G	345	1,360	Moderate
Well #3	2021001-03G	345	1,360	Moderate

#### What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- ? inventory land uses within the recharge areas of all public water supply sources;
- ? assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? publicize the results to provide support for improved protection.

#### SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

## INTRODUCTION

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including septic systems, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

#### Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential contaminant sources, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

#### This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

## 1. DESCRIPTION OF THE WATER SYSTEM

#### The Wells

Barre Mobile Home Park is served by three wells located in the woods west of Route 122 and east of Varney Way. Each well has a Zone I of 345 feet and an Interim Wellhead Protection Area (IWPA) of 1,360 feet. Each well is about 300 feet deep. Please refer to the attached Map of the Zone I and IWPA. The water from Well #1 serving the facility is filtered to remove particulates. Wells #2 and #3 have no additional treatment. For current information on monitoring results and treatment, please contact the Barre Mobile Home Park for a copy of the most recent annual Consumer Confidence Report.

### What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.

- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

### What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

## 2. DISCUSSION OF LAND USES IN THE PROTECTION AREAS

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination.

Key issues include:

1. **Inappropriate activities in Zone Is;**
2. **Aboveground Storage Tanks (ASTs) with heating oil;**
3. **Septic systems;**
4. **Stormwater drains in Zone I and IWPA; and**
5. **Lumber yard/mill.**

The overall ranking of susceptibility to contamination for the wells is Moderate, based on the presence of moderate and low threat land uses and activities in the IWPA, as seen in Table 2.

1. **Zone Is** – Currently, the wells do not meet DEP's restrictions, which only allow water supply related activities in Zone Is. The Zone Is contain buildings, a transportation corridor and parking areas. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.
2. **Aboveground Storage Tanks** – Residential ASTs with fuel oil are located within the IWPAs of the wells. The ASTs are constructed of steel and are mounted on concrete pads. The age of the ASTs range from three months to fifteen years.
3. **Septic Systems** – The septic systems are pumped every year. Residents should be trained on proper disposal of spent household chemicals and encouraged to participate in local Household Hazardous waste collections.
4. **Stormwater drains** – They are located within the Zone I and IWPA of all the three wells, along Route 122. As flowing stormwater travels, it picks up debris and contaminants from streets, parking areas, and lawns.
5. **Lumber yard/mill** – Lumber is only cut and dried. Equipment maintenance could be a potential source of Volatile Organic Compounds if improperly managed.

**Table 2: Table of Activities within the Water Supply Protection Areas**

Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Aboveground storage tank	All	All	Moderate	Residential fuel storage
Stormwater drains	All	All	Low	From residential and parking areas
Septic Systems	All	All	Moderate	See septic systems brochure attached
Building and grounds maintenance (storage shed)	No	#2, #3	Moderate	Shed used to store tractor, tools for repair work.
Aquatic wildlife	No	All	Low	On-site pond also attracts birds
Lumber yard/mill	No	#1	Moderate	Only cut and dried wood and haul away. Operation has been discontinued.
Parking areas, driveways & roads (Private & Rt. 122)	All	All	Moderate	Limit road salt usage and provide drainage away from wells

\* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use /

## Glossary

**Zone I:** The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

**IWPA:** A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I. To determine IWPA radius, refer to the attached map.

**Zone II:** The primary recharge area defined by a hydrogeologic study.

**Aquifer:** An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

**Hydrogeologic Barrier:** An underground layer of impermeable material that resists penetration by water.

**Recharge Area:** The surface area that contributes water to a well.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

## 3. PROTECTION RECOMMENDATIONS

Barre Mobile Home Parks should review and adopt the following recommendations at the facility:

### Zone I:

- ✓ Keep non-water supply activities out of the Zone I.
- ✓ Remove all non-water supply activities from the Zone I to comply with DEP's Zone I requirements. Please note that water systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying their system.
- ✓ Consider well(s) relocation if Zone I threats cannot be mitigated. Please note that DEP permit approvals must be obtained prior to the installation of a new well.
- ✓ Prohibit public access to the well(s) and pump house by locking facilities, gating roads, and posting signs.
- ✓ Conduct regular inspections of the Zone I. Look for illegal dumping, evidence of vandalism, check any above ground tanks for leaks, etc.
- ✓ Redirect road and parking lot drainage in the Zone I away from wells.

### Training and Education:

- ✓ Instruct residents, staff, and groundskeepers on proper use and disposal of household chemicals, pesticide and fertilizer use, and best management practices.
- ✓ Work with your community to ensure that stormwater runoff from the roadways is directed away from the wells and is treated according to DEP guidance.

### Facilities Management:

- ✓ Upgrade all oil/hazardous material storage tanks to incorporate proper containment and safety practices.
- ✓ Implement Best Management Practices (BMPs) for the use of fertilizer, herbicides and pesticides on facility property.

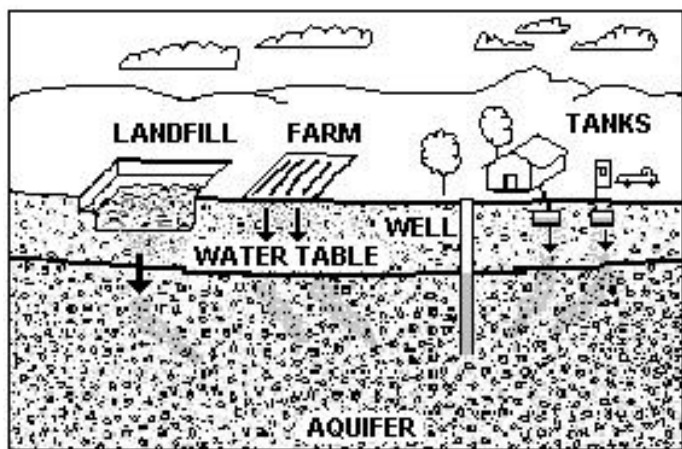


Figure 1: Example of how a well could become contaminated by different land uses and activities.

- ✓ Septic system components should be located, inspected, and maintained on a regular basis. Refer to the attachments for more information regarding septic systems.

### Planning:

- ✓ Work with local officials in Barre and Petersham to include the facility IWPA in Aquifer Protection District Bylaws and to assist you in improving protection.
- ✓ Have a plan to address short-term water shortages and long-term water demands. Keep the phone number of a bottled water company readily available.
- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspections, and creating educational activities.

**For More Information:**

Contact Josephine Yemoh-Ndi in DEP's Worcester Office at (508) 792-7650 x 5030 for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on DEP's web site at:  
[www.state.ma.us/dep/brp/dws](http://www.state.ma.us/dep/brp/dws).

Copies of this assessment have been provided to the water department, town boards, the town library and the local media.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

**ATTACHMENTS**

- Map of the Public Water Supply (PWS) Protection Area.
- Recommended Source Protection Measures Factsheet
- Your Septic System Brochure
- Pesticide Use Factsheet

**Table 2: Table of Activities within the Water Supply Protection Areas**

Facility Type	Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Residential Well #2	Aboveground storage tank	Yes	Yes	Moderate	Fuel storage
	Stormwater drains	Low	Yes	Low	
	Aquatic wildlife	No	Yes	Low	On-site pond also attracts birds
	Building and grounds maintenance (shed) #2 & #3 only	No	Yes	Low	Shed used to store tractor, tools for repair work.
	Structures	Yes	Yes	Moderate	Non-water supply structure in Zone I
	Parking areas, driveways & roads ( Private & Rt. 122)	Yes	Yes	Moderate	Limit road salt usage and provide drainage away from wells
	Septic System	Yes	Yes	Moderate	See septic systems brochure in the appendix